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The United States stockpiles 93 strategic and critical materials (metals, ores, and drugs) currently valued at about \$8.6 billion at 117 locations throughout the country. The General Services Administration's (GSA's) Federal Preparedness Agency (FPA) is responsible for planning, programing, and reporting on the stockpile. The National Security Council gives FPA guidance for developing stockpile policy. The Federal Supply Service (FSS) is responsible for purchasing, storing, maintaining, transferring, rotating, distributing, and protecting the materials. The estimated material requirements goals were increased for 72 of the 98 stockpile materials as of October 1, 1976. Findings/Conclusions: The present inventory of many materials is far short of the goals. Shortages totaling \$7 billion exist for 51 materials, including 33 for which insufficient inventory is on hand to meet even the highest priority needs. As long as goals remain at the present level, the timeframe for attainment will be quite lengthy--15 or more years for many items. Attainment has been hampered by such factors as: an acquisition policy concerned primarily with avoiding market disruptions, limiting the dollar value of acquisitions to less than the value of disposals, continued disposals of needed materials under long-term sales contracts, loans of materials which reduce the available inventory needed to satisfy goals, and budgetary constraints. The practice of reporting goals as being satisfied by subspecification inventory significantly overstates stockpile readiness. Recommendations: The Director of FPA should: formulate schedules for meeting acquisition goals so that the Congress can consider the

reasonableness of acquisition timeframes; separately identify in a report to the Congress those materials which do not meet industrial requirements and the cost and time needed to convert these materials; establish a formal procedure for systematic and periodic review of specifications; determine all instances when materials have deteriorated below acceptable standards and include such information in the report to the Congress; and adopt a more flexible storage policy that would recognize other important factors, including the capability to transport materials during an emergency and the shifts in industrial consumption patterns. (RRS)

7140

BY THE COMPTROLLER GENERAL

Report To The Congress

OF THE UNITED STATES

The Strategic And Critical Materials Stockpile Will Be Deficient For Many Years

The strategic and critical materials stockpile prevents a dangerous and costly dependence on foreign sources during a national emergency.

Attainment of stockpile goals will take 15 to 20 years due to

- an acquisition policy concerned primarily with avoiding market disruptions;
- limiting the value of acquisitions to less than the value of disposals;
- budgetary constraints; and
- management practices that may hamper the usefulness of the stockpile.

GAO makes recommendations to the General Services Administration for improving the program.



EMD-78-82
JULY 27, 1978



COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-125067

To the President of the Senate and the
Speaker of the House of Representatives

This report describes the problems surrounding attainment of goals for the strategic and critical materials stockpile to prevent dangerous costly dependence upon foreign sources during a national emergency.

We made our review pursuant to the Budget and Accounting Act, 1921 (31 U.S.C. 53), and the Accounting, and Auditing Act of 1950 (31 U.S.C. 67).

We are sending copies of this report to the Director, Office of Management and Budget; the Administrator of General Services; the Assistant to the President for National Security Affairs; and the Secretary of Defense.

A handwritten signature in black ink, reading "Loren B. Stewart".

Comptroller General
of the United States

COMPTROLLER GENERAL'S
REPORT TO THE CONGRESS

THE STRATEGIC AND CRITICAL
MATERIALS STOCKPILE WILL BE
DEFICIENT FOR MANY YEARS

D I G E S T

An estimated 15 to 20 years will be required to build the strategic and critical materials stockpile so it will contain the necessary amounts of metals, ores, and drugs to prevent a dangerous and costly dependence on foreign sources during a national emergency.

The Federal Preparedness Agency reports the total cost of achieving stockpile goals at \$11.6 billion and says that only \$4.6 billion of materials on hand apply to current goals. (See pp. 2 and 3.) CAO believes the shortage is greater than \$7 billion.

Stockpile acquisitions are restricted because of budgetary constraints and possible market disruptions. Current policies spread the acquisition for some materials to a period of 15 years or more. If shortages are critical, acquiring these materials more quickly would seem prudent. (See p. 5.)

GAO is now addressing two basic issues: (1) the management effectiveness of the existing stockpile program and (2) the viability of the stockpiling concept for achieving emergency preparedness. The first issue is the subject of this report. A study of the second is underway. (See p. 19.)

MANAGEMENT OF EXISTING PROGRAM
CAN BE IMPROVED

Some management policies and practices do not assure either the quality or the quantity of materials needed for an emergency.

Several factors cause or contribute to the deficiencies:

--There is no formal policy or practice for comparing industrial requirements with existing inventory. Therefore, some materials are inappropriately classified in

General Services Administration inventory records. (See pp. 10 to 14.)

- Materials are not routinely tested for quality. As a result, materials of questionable quality are being held to satisfy stockpile goals. (See pp. 12 and 13.)
- Many materials need upgrading or improving because they are not of the specified quality or are in the wrong form but are applied, or "offset," against goals anyway. Because of the volume of materials which need to be upgraded, this will be very expensive. (See p. 9.)
- Delivery of formerly excess commodities under long-term sales contracts is continuing even after it was determined that the undelivered materials were needed to meet new, increased goals. Recognizing this problem, the Federal Preparedness Agency plans to minimize the use of long-term sales contracts in the future. (See p. 6.)
- Industrial consumption patterns and the composition and location of the stockpile have changed significantly since most materials were acquired and stored. As a result, the stockpile may no longer be optimally located. (See p. 15.)

RECOMMENDATIONS

For the stockpile to be maintained for emergency preparedness, an extensive budgetary commitment will be required for acquisitions. Further management of the stockpile program needs to be improved even under the existing goals and objectives. Although GAO is assessing the concept of physical stockpiling and alternatives, the Administrator of General Services should, through the Director, Federal Preparedness Agency, make these interim improvements:

- Formulate schedules for meeting acquisition goals so that the Congress can consider the reasonableness of acquisition time frames.
- Separately indentify in its report to the Congress (1) those materials which do not meet industrial requirements and (2) the cost and time needed to convert these materials, and also the cost of converting lower form materials which are to be used to achieve the goals of higher form.
- Establish a formal procedure for systematic and periodic review of specifications.
- Determine all instances when materials have deteriorated below acceptable standards and include such information in its report to the Congress.
- Adopt a more flexible storage policy that would recognize such factors as the capability to transport materials during an emergency and shifts in industrial consumption patterns. (See p. 16.)

AGENCY COMMENTS

The General Services Administration agreed with most of GAO's recommendations. Specifically:

- Some materials probably no longer meet current industrial standards.
- Because storage locations could be a problem, General Services has established a committee to study them.
- General Services will report to the Congress those instances when materials have deteriorated below acceptable standards.

Regarding offsetting, General Services pointed out that the law requires excesses to be made available for disposal. However, they are retained against goals for other materials as a

means of holding them until funds are available for upgrading. GAO does not question the propriety of this practice, but notes that it does overstate the true degree of goal fulfillment. General Services indicated that shortages are not as severe as would appear, because the highest priority goals will be met in fiscal year 1980 if anticipated funding levels are achieved. GAO believes that published reports do not adequately clarify this.

General Services also stated that unless funds are reprogramed into higher priority defense needs, it will attempt to buy materials up to the point of causing market disruptions-- an approach which is in accordance with the wishes of congressional committees.

Goal achievement could be accelerated only by increasing funding levels and by eliminating the prohibitions on (1) market disruptions and (2) buying in excess of industrial demand. The problem of attaining all stockpile goals within a time period consistent with national security needs yet without significant market disruptions remains, however effective program management might become. Therefore, GAO is addressing in greater detail the viability of the stockpile concept and possible alternatives.

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ABBREVIATIONS

FPA	Federal Preparedness Agency
FSS	Federal Supply Service
GAO	General Accounting Office
GSA	General Services Administration

CHAPTER 1

INTRODUCTION

The United States stockpiles 93 strategic and critical materials (metals, ores, and drugs) currently valued at about \$8.6 billion at 117 locations throughout the country. (See app. I for a complete list of the materials, their goals, and status.) "Strategic" refers to the relative availability of materials, while "critical" refers to their essentiality. These materials are acquired and stockpiled to prevent a dangerous and costly dependence on foreign sources during a national emergency.

Although some materials were stockpiled before and during World War II, pursuant to the Act of June 7, 1939 (53 Stat. 811), enactment in 1946 of the Strategic and Critical Materials Stock Piling Act (Stock Piling Act) (50 U.S.C. 98 et seq.) initiated the first major Government program of stockpiling strategic and critical materials for U.S. industrial and military needs during an emergency. Most acquisitions were made in the 1950s.

The Government has also acquired stockpile materials under two other acts. Section 303 of the Defense Production Act of 1950, as amended, (50 U.S.C. App. 2093) authorized the Government to purchase metals and minerals to stimulate defense-related expansion of production capacity. Section 104(b) of the Agricultural Trade Development and Assistance Act of 1954 (68 Stat. 454, 456) provided for acquisition of strategic and critical materials with foreign currencies obtained from the sale of surplus food commodities. The latter provision was eliminated under section 2 of the Food for Peace Act of 1964 (7 U.S.C. 1704 (b)).

STOCKPILE POLICY CHANGES

After World War II the types and quantities of materials stockpiled were based on the assumptions that the United States would be engaged in a 5-year conflict requiring 10 million men. These assumptions were changed in 1958, to reflect planning for a 3-year conflict requiring 5 million men. In April 1973 the assumed length of the conflict was changed to 1 year. Further, it was assumed that foreign imports would be available, except from Communist and combatant countries, and that defense needs could be met through

increased civilian austerity and use of substitute materials. In effect, the 1958 and 1973 changes reduced the quantities of materials needed for stockpiling.

In March 1975 the Subcommittee on Seapower and Strategic and Critical Materials, House Committee on Armed Services, voted to authorize no further disposals of stockpile materials until a new policy study was conducted and the planning period increased to 3 years. In a report 1/ issued the same month, we recommended that assumptions be reevaluated to insure that adequate materials were stockpiled to meet the Nation's readiness needs.

In August 1975 the National Security Council directed that such a reevaluation be undertaken by an interagency committee. This reevaluation was completed in July 1976, and basic stockpile assumptions and policy options were submitted to the President.

On October 1, 1976, the President's policy decision and new goals were announced. The major change called for a stockpile capable of supporting U.S. defense requirements for the first 3 years of a major war, assuming large-scale industrial mobilization. It also provided for supporting a broad range of basic economic needs to insure the health, welfare, morale, and productivity of civilians during war-time. As a result of this new policy, goals increased for 72 of the 93 stockpiled materials.

Stockpile goals represent the estimated material requirements for the first 3 years of a war, above those which could be expected to be available from domestic production or reliable imports. The total estimated cost of achieving current goals is \$11.6 billion. The current inventory is \$8.6 billion, which includes materials valued at \$4.6 billion applicable to these goals and about \$4 billion in materials that have been previously acquired but for which goals no longer exist. Consequently, the remaining cost of reaching current goals is reported at \$7 billion.

The October 1976 announcement sparked much conflicting congressional interest in the stockpile. As a result, on February 22, 1977, the President announced a moratorium on

1/"Stockpile Objectives of Strategic and Critical Materials Should Be Reconsidered Because of Shortages" (LCD-74-440, Mar. 11, 1975).

stockpile acquisitions and disposals pending an additional policy review. On September 9, 1977, we reported 1/ on a number of observations on stockpile issues to the Assistant to the President for National Security Affairs. We requested that they be considered during any reevaluation of stockpile policy.

Shortly after release of our report, the President reaffirmed the 1976 policy and underlying assumptions, although the acquisition priorities were changed.

MANAGEMENT OF THE STOCKPILE

The General Services Administration's (GSA's) Federal Preparedness Agency (FPA) is responsible for planning, programming, and reporting on the stockpile. The National Security Council gives FPA guidance for developing stockpile policy. GSA's Federal Supply Service (FSS) is responsible for purchasing, storing, maintaining, transferring, rotating, distributing, and protecting the materials.

Although FPA determines stockpile policy and goals, it relies upon information from other Federal agencies on supply and capacity projections, probable effects on foreign relations, defense requirements for materials, probability of access to world sources of materials during wartime, and domestic mineral reserves. The major advising agencies are the Departments of Commerce, State, the Treasury, Defense, and the Interior.

SCOPE OF REVIEW

Our examination of the stockpile included (1) reviewing the laws, policies, and regulations which authorized the program and affect its scope and administration, (2) analyzing the controls over the quantity and quality of stockpile materials, and (3) talking with FPA, FSS, and GSA officials responsible for managing the stockpile. We also consulted with officials of the National Security Council, National Academy of Sciences, National Bureau of Standards, and Department of Commerce, and representatives of trade associations and industrial firms which might use stockpile materials. We observed the storage of materials at GSA storage sites at Curtis Bay, Maryland; Somerville, New Jersey; Lexington, Kentucky; and Point Pleasant, West Virginia.

1/EMD-77-68, Sept. 9, 1977.

Our examination did not include a detailed review of the process for determining which materials should be stockpiled or the quantities that should be stored. Our review of stockpile management issues includes this issue.

CHAPTER 2

ATTAINMENT OF STOCKPILE GOALS WITHIN A REASONABLE TIME DOES NOT APPEAR LIKELY

Effective October 1, 1976, the goals increased for 72 of the 93 stockpile materials. The present inventory of many materials is far short of the goals. Shortages totaling \$7 billion exist for 51 materials, including 33 for which insufficient inventory is on hand to meet even the highest priority needs. However, goals are subject to change, but as long as they remain at present levels, the time frame for attainment will be quite lengthy--15 or more years for many items. GSA has pointed out that 42 materials goals have been met and another 10 goals can be met through upgrading.

Stockpile acquisitions are restricted by budgetary constraints, concern over market impacts, and international political effects of stockpile transactions. Further disposal of commodities under long-term sales contracts and loans of materials have also reduced the inventory available to satisfy goals.

ACHIEVING GOALS IS A LONG-TERM PROSPECT

Planned acquisitions and disposals of materials are presented each year in the Annual Materials Plan. However, the plan does not present any schedule of acquisitions needed to meet goals beyond the budget year. Current policy will result in acquisitions and disposals being spread over 15 to 20 years. The value of disposals is to exceed the costs of acquisitions for each of the first 5 years.

FPA has interpreted the Stock Piling Act as requiring that market disruptions be minimized when purchasing materials. The reluctance to buy materials because of possible market disruptions will significantly affect the time it will take to reach stockpile goals. Planned procurement of materials to satisfy goals for commodities such as bauxite, cadmium, cobalt, pyrethrum, quinidine, ferro vanadium, iridium, and jewel bearings may require more than 25 years.

For example, FPA is not likely to reach its goal for jewel bearings for over 70 years because of limited production capacity and lack of raw materials. The Government-owned William Langer Jewel Bearing Plant in Rolla, North Dakota, is, by regulation, the sole source for stockpile purchases. From this facility FPA has purchased about 1 million jewel bearings annually. In addition, the plant is a mandatory source for Federal agencies and contractors needing jewel bearings to fulfill Government contracts.

While GSA feels the goal for jewel bearings will soon be reduced significantly, current demand is for 224.6 million pieces. However, there are only 64.4 million pieces in inventory and, of these, 14.7 million have been identified as subspecification grade and are considered worthless. Further, officials believe 8.5 million additional bearings are potentially obsolete. The total shortage of acceptable quality jewel bearings may actually be as much as 183.4 million pieces.

Many years will be required to procure this shortage. Domestic jewel bearings production capability is limited almost entirely to the Government-owned plant. This plant produces about 2.5 million bearings annually. Although the plant could produce an estimated 14 to 16 million bearings annually if operated on three full shifts, skilled employees are not available to operate more than one shift. Therefore, if goals do not change, over 70 years' production may be needed to achieve current goals.

The Langer Plant depends on foreign sources for raw materials. About 90 percent of these raw materials come from foreign sources which FPA considers inaccessible during wartime.

DISPOSAL OF NEEDED COMMODITIES HINDERS ATTAINMENT OF GOALS

Goals for individual commodities are subject to change during the annual materials-planning process. When goals increase, materials formerly considered excess and committed or planned for sale can become needed to satisfy the new goals. In many instances disposal of these commodities is continuing even though replacements must be bought. Attainment of goals will be hindered until the replacements are acquired.

Thus many materials considered excess just before October 1, 1976, are now needed to help meet many of the increased goals. However, many of these materials have been committed for sale. FPA continues to deliver these materials. It was FPA's policy decision that readiness gains from retaining the materials were outweighed by possible damage to the integrity of the marketing program and market disruptions that would be caused by canceling the sales contracts.

Between October 1, 1976, and March 31, 1977, quantities of 17 commodities for which shortages existed were delivered to buyers under prior contracts. Some of these materials

remain in Government storage facilities but are still committed for sale even though the shortages still exist. Eventually all 17 commodities will have to be replaced if goals for them are to be satisfied. FPA acknowledges this disposal practice has been a problem in the past and plans to minimize the use of long-term contracts in the future.

MATERIALS LOANED TO GOVERNMENT
AGENCIES AND CONTRACTORS
MAY NOT BE AVAILABLE IN AN EMERGENCY

FPA has made loans, officially termed "custodial transfers," of several materials to Government agencies and contractors. As of November 1, 1977, quantities of palladium, platinum, iridium, lead, quartz, and zinc valued at about \$5.7 million were on loan. Although most of these were excess when they were loaned, there are currently shortages for all but lead and quartz. About 41 percent of the iridium inventory is on loan even though the total inventory of this material, including the loaned amount, is not sufficient to meet even priority needs.

FPA's general policy is to make loans only when materials exceed stockpile goals. But this has not always been the case. For example, FPA's most recent loan, of 2,200 troy ounces of palladium valued at \$367,400, was made when the platinum inventory, including that on loan, satisfied only about one-third of the new goal.

The loaned materials are generally used without being altered, but in some instances they are partially consumed or alloyed with other materials. In these cases the borrowing activity is responsible for replacing the material. The agreements under which FPA allows commodities to be loaned specify loan termination dates and require that the materials be returned on demand. However, some agreements have been extended several times, and some materials have been on loan for lengthy periods.

The \$5.7 million of materials on loan is not great when compared with the value of the total stockpile. Nevertheless, the practice of loaning may not be consistent with having the commodities immediately available in an emergency. If the return of these materials were delayed or if they could not be returned, unanticipated shortages would occur.

In commenting on our draft report, GSA said the policy on loans has been tightened considerably, to assure that it can recover loaned materials within the limits of an emergency.

CHAPTER 3

MANAGEMENT POLICIES DO NOT ASSURE

MATERIALS ARE SUITABLE FOR USE IN AN EMERGENCY

To prevent a costly and dangerous dependence on foreign sources during an emergency, the stockpile must contain sufficient materials in the proper form and quality. FPA estimates that \$11.6 billion of materials are required to satisfy this need, of which \$4.6 billion are in the present inventory, leaving a shortage of \$7 billion.

We did not undertake a detailed physical inventory of stockpile materials. However, we performed limited test counts; traced selected inventory transactions; and reviewed studies, inspection reports, inventory reconciliations, and internal audit reports regarding inventory practices. As a result, we believe that the quantities on the inventory records are reasonably accurate.

We believe, however, that the \$4.6 billion figure is an overstatement of the amount of materials that would be suitable for immediate use during an emergency because a great deal of these materials are not in the desired form or quality. The materials being held include \$59.8 million of materials identified as not meeting stockpile specifications and \$846.3 million of materials in different forms than desired (\$612.8 million of these materials are in a lower form and \$233.5 million are in a higher form). Additionally, many materials met Government specifications when purchased 20 years ago but do not meet current industrial standards. Therefore, the actual shortage probably exceeds the \$7 billion estimated by FPA.

GSA policy is that materials should be maintained at the maximum quality and condition for immediate industrial use during an emergency. However, since many materials were stockpiled 20 years ago in a form or quality no longer used by industry, they need to be reprocessed, refined, or otherwise modified. Specifications for most materials now generally require higher material content; lower allowable amounts of trace elements; and in some cases, different forms.

EXCESSES OF SOME FORMS OF MATERIALS ARE
APPLIED AGAINST REQUIREMENTS
FOR OTHER MATERIALS

Goals are often developed for different forms of materials within groupings of related materials. Inventories of some forms of materials are less than goals; however, other forms of the same materials may exceed goals. In these instances FPA sometimes offsets the shortages with excesses of other forms of the same materials. For example, alumina, which is used to produce aluminum (a higher form material), is obtained from bauxite (a lower form material). There is no alumina in the stockpile. Consequently, FPA uses excess bauxite to offset 56 percent of the alumina shortage.

As of March 31, 1977, seven lower form materials valued at \$612.8 million were being used to offset goals for higher form materials valued at \$1.4 billion and nine higher form materials valued at \$233.5 million were offset against lower form material goals valued at \$100.1 million.

Obviously the excess lower form materials would need refining or other processing. However, the needed capacity would not be available during wartime since the goal-setting process assumes full use of all such domestic smelting and refining capacity. Goals for the higher forms were developed to avoid bottlenecks such as transportation, energy, or labor shortages. Therefore, the actual shortages are understated because under present circumstances the required form of the materials will not be available when needed.

Provisions for improving stockpile quality

The Stock Piling Act provides for rotating materials to prevent deterioration. GSA policy also provides for bringing subspecification inventory to specification quality and upgrading materials to higher forms when the costs of such actions do not exceed the cost of acquiring new materials.

FPA has identified at least 22 materials which need upgrading or improving because they are applied against goals for higher form materials or do not meet industrial specifications. However, of the seven lower form materials used as offsets, only three were identified for upgrading. Upgrading would cost the Government hundreds of millions of dollars. For example, it would cost almost \$500 million to convert excess bauxite to alumina.

Shortly after the February 1977 moratorium on acquisitions and disposals was announced (discussed on p. 2), FPA considered an upgrading program. FPA, however, decided not to implement it because it might be perceived as circumventing the moratorium. Further, costly commitments for upgrading might have resulted if significant goal reductions had ensued from the policy evaluation that took place during the moratorium. Although FPA considers offsetting as an interim step in restructuring the stockpile, it will be many years before these materials are upgraded.

IMPACT OF CHANGING TECHNOLOGY ON THE USEFULNESS OF MATERIALS

Chemical and physical requirements of the more basic stockpile materials, such as some ores, may remain unchanged for many years. However, technological changes may limit the use of some materials in a very few years. Identifying and assessing the impact of these changes is essential to assuring the stockpile's suitability for use in an emergency.

Purchase specification and special instruction review policy

To insure quality, national stockpile purchase specifications prescribe required chemical and physical characteristics. Included are requirements for packaging, marking, identifying, shipping, sampling, inspecting, and testing materials. National stockpile special instructions, which accompany most purchase specifications, provide direction, guidance, and information to GSA concerning quality, refining and processing, crediting to the stockpile goal, storage segregation and rotation, and disposal criteria.

GSA has no formal policy or practice for comparing current industrial requirements with existing inventory to identify limitations in materials uses. Although FPA has in limited instances compared stockpile inventory with revised purchase specification requirements and identified nonspecification grade materials, it regards this function to be the responsibility of FSS. FSS, however, has not performed this function, and officials have said that their staff does not have the expertise to determine whether stockpile inventory would be suitable to prevent costly or dangerous dependency on a foreign source during an emergency.

An Interagency Committee on Stockpile Purchase Specifications and Special Instructions was created in December 1976, but the first meeting was not held until August 1977. We could not identify any formal policy for the periodic and systematic review of purchase specifications and special instructions to assure that these conform with current industrial requirements. Rather, reaction to changes in stockpiling policies and resulting acquisition and disposal plans appear to be the primary motivation for review of material quality requirements.

GSA acquired most of the stockpile before 1959; however, purchase specifications for at least 75 of these materials have been revised. In general, materials meeting the original specifications are shown as specification grade material in GSA inventory records regardless of subsequent changes. For example, in 1964 over 6 million pounds of cobalt were identified as not meeting the 1957 specification for iron content, and the current specification is even more stringent. Although GSA contends most of this material can be used for civilian needs and some for defense needs, 1.7 million pounds, nonetheless, is incorrectly classified as meeting specifications.

Comparison of existing inventory quality with current industrial requirements demonstrates instances when materials are not ready for immediate use in a national emergency. Inventories of tantalum metal powder and the platinum group metals illustrate this situation.

Capacitor grade tantalum metal powder

The inventory of this powder was acquired in the late 1960s. It represents 82 percent of the current inventory of tantalum metal. FPA has said this material cannot be used in present capacitor production unless producers revert to obsolete methods. Yet inventory records list this powder as specification grade material held to satisfy the tantalum metal goal.

GSA has known of this obsolescence since March 1976 and is still considering solutions to the problem, including remelting the powder into ingots or slabs and applying it to the metal portion of the tantalum goal and stockpiling alternative forms to satisfy the goal. Further, FPA estimated that if the current inventory was of the quality traded in the normal market, it would be valued at about \$9 million; however, due to obsolescence, its actual value approximates the scrap value of \$3 million. GSA commented that until the rate of technical change in the capacitor industry stabilizes,

the same risk of obsolescence will be present with the upgraded material. Therefore, upgrading must be approached with caution.

Platinum group metals

None of the inventories of platinum group metals (platinum, palladium, and iridium) meet both the chemical requirements for purity and the physical requirements for sponge form. A major producer of these metals indicated that there are serious limitations to the usability of stockpiled platinum group metals. These inventories, he said, should be upgraded and refined to reflect the more sophisticated requirements of current defense needs, such as catalysts for nitric acid in production of ammunition and refined aviation and rocket fuel. GSA, however, classifies these materials as specification grade, held to satisfy stockpile goals. Although purity levels would not permit exclusive use of the entire stockpile for the highest defense applications, most could be used for similar industrial applications.

FPA considers tantalum metal powder and the platinum group metals as candidates for upgrading to make them suitable for immediate use and says that even in their present form they can be used in a wide variety of applications.

EFFECTS OF DEGRADATION AND AGE ON STOCKPILE QUALITY

FSS is responsible for acquiring, storing, maintaining, and managing stockpile materials. These responsibilities include development of policies, methods, and procedures relating to procurement; quality assurance inspection; upgrading; processing; refining; rotation; storage; and distribution of these materials. In addition, FPA is responsible for developing policy guidance and programs and providing technical advice and assistance on upgrading, rotation, quality assurance, and improvement of materials.

Quality testing

GSA policy requires that stockpile materials be sampled, analyzed, tested, and physically evaluated before acceptance to ensure that they conform to all specifications and contract requirements.

Materials are inspected periodically by FSS. These inspections, however, are primarily visual and concern obvious signs of physical deterioration, such as mold, mildew,

discoloration, or oxidation. Materials stored in containers are inspected for signs of container deterioration, such as rust, leakage, or breakage.

Materials receive very little testing after acquisition. However, some have been tested. Examples follow.

Quinidine and quinine sulfates

In 1973 inventories of quinidine and quinine sulfates were sampled and tested by the Food and Drug Administration. Of the 105 lots examined, 42 failed specific test requirements but were not sufficiently outside the limits to be rejected. However, 10 lots were found degraded and were recommended for destruction. The 10 lots included 53,429 ounces of quinidine sulfate and 426,600 ounces, or about 13 percent, of the quinine sulfate inventory.

Nonetheless, these 10 lots remain in the stockpile and are reported as being worth the same as usable materials sold in the normal market--about \$2.4 million. The quinidine sulfate, valued at \$365,000, is classified as specification grade held to meet stockpile goals. Some 228,600 ounces of the quinine sulfate, valued at the current market price of over \$2 million, were applied against stockpile goals but not classified as specification grade.

Officials could not explain why the quinidine sulfate continues to be considered specification grade or the reasonableness of holding subspecification material to meet stockpile goals. However, according to GSA's comments on our draft report, it feels that most of this material can be upgraded.

Quality of material sold to industry

Excess materials are sold to private industry under various arrangements. Although buyers generally rely upon GSA's analysis of record which is included in the sales offerings, they often test the purchased materials for quality. We examined the sales of several materials and contacted the buyers. Although GSA feels quality problems and complaints have been minimal, we identified several materials for which buyers found the quality significantly less than GSA's analysis of record. Further, substantial quantities of similar materials remain in the inventory which are apparently of lower quality than shown in GSA's records. For example:

--In 1974 over 500,000 pounds of stockpile opium gum were purchased by three drug firms on the basis of

its stated morphine content. Analysis by the 3 firms indicated a lower morphine content than GSA's analysis of record for 38 of the 41 lots of opium gum. Under terms of the sales, samples with differences in analysis of more than 0.3 percentage units were forwarded to the Government for further analysis. The Drug Enforcement Agency analyzed 32 samples and found 27 had even lower morphine content than the samples analyzed by the drug firms and that all were below GSA's analysis of record.

- Laboratory tests performed by the buyer of 21,096 tons of metallurgical grade manganese ore, purchased from GSA's Point Pleasant, West Virginia, depot, demonstrated that the material was of substantially lower quality than advertised. GSA could not explain this discrepancy and continues to hold 19,015 tons of similar quality manganese ore at this depot to satisfy stockpile goals.
- A purchaser of almost 300,000 pounds of cobalt complained to GSA when laboratory tests showed that some of the material had an excessively high carbon content. GSA found that the carbon content had been understated when it was sold and adjusted the contract accordingly. At this same location 23,000 additional pounds of cobalt are identified as similar in carbon content. This material, classified as specification grade, is held to satisfy stockpile goals.
- Independent tests of tungsten sold in 1976 demonstrated, according to the buyer, that the material was substantially and materially different from GSA's analysis of record.
- Ferromolybdenum purchased in 1974 and 1975 was found by the buyer to be 2.5 to 9.8 percent less pure than GSA's analysis of record. This was considered by the buyer to be well in excess of commercially acceptable tolerances.

CHAPTER 4

TRANSPORTATION CAPABILITIES AND OTHER FACTORS

NEED TO BE CONSIDERED IN PLANNING

STORAGE OF MATERIALS TO BE ACQUIRED

Industrial consumption patterns and the composition and location of the stockpile have changed significantly since most materials were acquired and stored. Most were acquired before fiscal year 1960, and almost 50 percent of disposals were made during fiscal years 1972-77. Materials were initially stored at locations on the basis of such considerations as industrial consumption patterns, transportation capabilities, and strategic dispersal of materials. However, materials were sold and shipped from various locations without regard to these criteria. Thus, many materials may not be stored at the best locations to facilitate their use in an emergency.

FPA's policy in recent years has been to stockpile materials at locations having the lowest storage costs. When disposing of excesses, FPA tries to retain the best quality materials. If materials stored in more than one location are of equal quality, the material at the least costly location is retained. Industrial consumption patterns and vulnerability of storage facilities are considered only if the material quality and storage costs are equal for the different locations. Obviously this policy does not fully consider other factors, which could affect the prompt availability of materials during an emergency.

During wartime many demands would be made on the transportation industry to move personnel, equipment, and military and civilian supplies, as well as stockpile materials. In past years storage criteria considered such things as proximity to wartime facilities where the materials would be consumed, avoidance of seaports and transportation bottlenecks, and vulnerability to loss from enemy attack. The analysis which provided the original locations, however, has not been updated in 15 years.

FPA is requesting fiscal year 1979 funds to analyze the locations of industrial users of stockpile materials. It has not, however, assessed industrial capability to move materials from storage to consumption points during a period of increased demand for transportation. As additional materials are acquired, storage location criteria will become increasingly important, as will cost.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

The strategic and critical materials stockpile was authorized to prevent a dangerous and costly dependence on foreign sources during a national emergency. To achieve this end, stockpile goals should be attained within a reasonable time; however, attainment has been hampered by such factors as

- an acquisition policy concerned primarily with avoiding market disruptions,
- limiting the dollar value of acquisitions to less than the value of disposals,
- continued disposals of needed materials under long-term sales contracts,
- loans of materials which reduce the available inventory needed to satisfy goals, and
- budgetary constraints.

Inventories should be maintained at maximum quality for immediate use in an emergency. To the extent that inventories are not ready for immediate use, the momentum of the economy under emergency conditions might be adversely affected.

The practice of reporting goals as being satisfied by subspecification inventory significantly overstates stockpile readiness. Many materials would have to be upgraded or reprocessed before they could be used even in limited applications. These conditions are not consistent with GSA's policy of maintaining materials at the maximum quality so that they will be ready for immediate use.

Many materials classified as meeting specifications may have met specifications when acquired 20 years ago; however, they no longer meet current technological needs. Further, substantial quantities of materials are not of specification quality, and others are not in the desired form. Upgrading the present inventory to its desired form would cost hundreds of millions of dollars.

FPA is considering certain materials for rotation or upgrading. However, in the absence of any formal, systematic approach to review and revision of purchase specifications and comparison of existing inventory with industry requirements, we do not believe the limitations of the inventory have been adequately assessed. In numerous instances GSA did not know that the quality of materials differed from its own analysis of record.

For the stockpile to be maintained for emergency preparedness, an extensive budgetary commitment will be required. Further, the management of the stockpile will need to be improved, even under the existing program goals and objectives. Also, many materials may be stored in locations that are not best suited for use in an emergency.

RECOMMENDATIONS

Although we are assessing the concept of physical stockpiling and alternatives, we recommend that the Administrator of General Services, through the Director, FPA, make these interim improvements:

- Formulate schedules for meeting acquisition goals so that the Congress can consider the reasonableness of acquisition time frames.
- Separately identify in its report to the Congress (1) those materials which do not meet industrial requirements and (2) the cost and time needed to convert these materials, as well as to convert those lower form materials which are being applied against goals for a higher form.
- Establish a formal procedure for systematic and periodic review of specifications.
- Determine all instances when materials have deteriorated below acceptable standards and include such information in its report to the Congress.
- Adopt a more flexible storage policy that would recognize other important factors, including the capability to transport materials during an emergency and the shifts in industrial consumption patterns.

AGENCY COMMENTS

GSA agreed with most of our recommendations. It agreed, for example, that some materials probably no longer

meet current industrial standards. An interagency committee was established in December 1976 to review 43 materials in the Annual Materials Plan for industrial standards. However, GSA said it will ask the committee to review all materials at least every 5 years. It felt the magnitude of the problem is probably small but said materials not meeting specifications will be reported in the semiannual stockpile report to the Congress as they become known.

Recognizing that storage locations could be a problem, GSA has established a committee to study them.

GSA also agreed to report to the Congress instances when materials have deteriorated below acceptable standards.

Regarding offsetting, GSA pointed out that the law requires that excesses be made available for disposal. However, some excesses are retained against goals for other materials as a means of holding them until funds are available for upgrading.

We do not question the fiscal wisdom of the practice, but it tends to overstate the degree of goal attainment.

GSA questioned whether it would actually take 70 years to reach the goals. It said that it would take 15 years or more to achieve some goals but that the 70-year period, which relates only to jewel bearings, is inaccurate because the jewel bearing goal and resultant procurement leadtimes are expected to drop dramatically over the next 5 years. GSA is intentionally limiting procurement to 1 million bearings per year until technological trends can be assessed. This rate will keep the Government-owned plant operating but also lessen the likelihood of buying materials that will soon become technologically obsolete.

We cannot dispute this contention, and GSA's actions indicate a conscientious effort toward careful management of stockpile goals; however, at the same time it does raise questions about the validity of GSA's present goals.

In regard to the rate of goal achievement, GSA said that unless funds are reprogramed into higher priority defense needs, it will attempt to buy materials up to the point of causing market disruptions. It said that this approach is in accordance with the wishes of congressional committees.

It also pointed out that goals are divided into nine groups and ranked according to priority. GSA indicated

that shortages are not as severe as would appear, because the highest priority goals will be met in fiscal year 1980 if anticipated funding levels are achieved. Goal achievement could be accelerated only by increasing funding levels and by eliminating the prohibitions on (1) market disruptions and (2) buying in excess of industrial demand.

We recognize that some requirements are naturally more urgent than others. Nonetheless, the stockpile is established by law to include those materials needed to "decrease and prevent wherever possible a dangerous and costly dependence of the United States upon foreign nations * * *." Thus any valid goal that are unmet would presumably create such a "dangerous and costly dependence." Otherwise, the lower priority goals must not meet the legal definition of stockpile requirements.

Further, if goals do contain such a wide range of priorities, then we believe the semiannual report to the Congress is misleading and suggest that it set forth the priorities of the goals and the rate of achievement within each priority.

The problem of attaining all goals within a time period consistent with national security needs yet without significant market disruptions remains, however effective program management might become. Therefore, we are examining the viability of the stockpile concept and alternatives, and we anticipate issuing a report on our findings.

**SUMMARY OF GOVERNMENT INVENTORIES, GOALS,
EXCESSES AND BALANCE OF DISPOSAL AUTHORIZATIONS**

**Basic Stockpile Materials
March 31, 1977**

(Market Value - Millions of Dollars)

Commodity	Unit	Goal ¹	Total Inventory ²	Market Value ³	Excess ⁴	Deficit	Balance of Disposal Authorization
1. Alumina	ST	11,532,000	0	\$ 0	0	5,018,570 ^A	0
2. Aluminum	ST	0	1,683	1.6	0 ^A	0	0
3. Aluminum Oxide, Abrasive Grain ..	ST	75,000	50,905	15.8	0	0 ^B	0
4. Aluminum Oxide, Fused, Crude ...	ST	147,615	249,009	44.9	77,299 ^B	0	0
5. Antimony	ST	20,130	40,714	147.3	20,584	0	0
6. Asbestos, Amosite	ST	26,291	42,495	14.5	16,204	0	16,204
7. Asbestos, Chrysotile	ST	0	10,955	5.0	10,955	0	0
8. Bauxite, Metal Grade, Jamaica Type	LDT	523,000	8,858,881	213.9	0 ^A	0	0
9. Bauxite, Metal Grade, Surinam Type	LDT	0	5,299,596	153.2	0 ^A	0	0
10. Bauxite, Refractory Grade	LCT	2,083,000	174,567	22.0	0	1,908,433	0
11. Beryl Ore (11% BeO)	ST	0	17,986	8.1	0 ^C	0	0
12. Beryllium Copper Master Alloy ...	ST	16,710	7,387	46.7	0	0 ^C	0
13. Beryllium Metal	ST	895	229	34.3	0	549 ^C	0
14. Bismuth	LB	771,000	2,081,298	15.6	1,310,298	0	0
15. Cadmium	LB	24,701,000	6,329,068	19.0	0	18,371,932	0
16. Castor Oil, Sebacic Acid	LB	0	5,009,697	6.4	5,009,697	0	0
17. Chromite, Chemical Grade Ore (Gross Weight)	SDT	734,000	247,272	12.9	0	486,728	0
18. Chromite, Metallurgical Grade Ore (Gross Weight)	SDT	2,550,000	1,956,382	256.8	0	0 ^D	0
19. Chromite, Refractory Grade Ore (Gross Weight)	SDT	642,000	401,223	25.4	0	240,777	0
20. Chromium, Ferro, High Carbon ...	ST	236,000	402,694	300.1	0 ^D	0	0
21. Chromium, Ferro, Low Carbon ...	ST	124,000	318,853	374.1	124,140 ^D	0	0
22. Chromium, Ferro, Silicon	ST	69,000	58,356	42.0	0	10,644	0
23. Chromium, Metal	ST	10,000	3,763	19.8	0	6,237	0
24. Cobalt	LB Co	85,415,000	40,891,926	212.6	0	44,523,074	0
25. Columbium Carbide Powder ...	LB Cb	0	21,372	0.4	0 ^E	0	0
26. Columbium Concentrates	LB Cb	3,131,000	1,780,859	5.3	0	177,042 ^E	0
27. Columbium, Ferro	LB Cb	0	930,911	4.4	0 ^F	0	0
28. Columbium, Metal	LB Cb	0	44,851	1.1	0 ^E	0	0

**SUMMARY OF GOVERNMENT INVENTORIES, GOALS,
EXCESSES AND BALANCE OF DISPOSAL AUTHORIZATIONS (Continued)**

**Basic Stockpile Materials
March 31, 1977**

(Market Value - Millions of Dollars)

Commodity	Unit	Goal ¹	Total Inventory ²	Market Value ³	Excess ⁴	Deficit	Balance of Disposal Authorization
29. Copper	ST	1,299,000	20,433	\$ 31.1	6	1,278,567	0
30. Cordage Fibers, Abaca	LB	24,000,000	0	0	0	24,000,000	0
31. Cordage Fibers, Sisal	LB	114,000,000	0	0	0	114,000,000	0
32. Diamond Dies, Small	PC	0	25,473	1.1	25,473	0	0
33. Diamond, Industrial, Crushing Bort	KT	14,974,000	30,529,723	67.9	15,555,723	0	6,829,723
34. Diamond, Industrial, Stones	KT	5,559,000	19,999,999	161.6	14,440,999	0	0
35. Feathers and Down	LB	6,494,000	373,784	2.0	0	6,120,216	373,784 ⁴
36. Fluorspar, Acid Grade	SDT	1,594,000	892,138	93.7	0	701,862	0
37. Fluorspar, Metallurgical Grade	SDT	1,914,000	411,788	35.8	0	1,502,212	0
38. Graphite, Natural - Ceylon, Amorphous Lump	ST	6,271	5,499	2.3	0	772	0
39. Graphite, Natural - Malagasy, Crystalline	ST	20,472	18,495	9.6	0	1,977	0
40. Graphite, Natural - Other than Ceylon and Malagasy	ST	34,748	2,802	0.5	0	31,946	0
41. Iodine	LB	3,333,000	8,011,582	20.7	4,678,582	0	0
42. Jewel Bearings	PC	224,623,000	64,457,120	37.4	0	160,165,880	0
43. Lead	ST	865,000	601,122	372.7	0	263,878	0
44. Manganese, Battery Grade, Natural Ore	SDT	12,736	264,453	28.7	235,619 ^F	0	129,452
45. Manganese, Battery Grade, Synthetic Dioxide	SDT	19,105	3,007	1.4	0	0 ^F	0
46. Manganese Ore, Chemical Grade	SDT	217,136	230,919	15.2	0	16,217	0
47. Manganese Ore, Metallurgical Grade	SDT	2,052,000	3,631,605	169.0	1,334,005 ^G	0	1,029,197
48. Manganese, Ferro, High Carbon	ST	439,000	599,757	227.6	160,757	0	0
49. Manganese, Ferro, Low Carbon	ST	0	0	0	0	0	0
50. Manganese, Ferro, Medium Carbon	ST	99,000	28,920	19.6	0	0 ^G	0
51. Manganese, Ferro, Silicon	ST	81,000	23,574	11.0	0	0 ^G	0
52. Manganese Metal, Electrolytic	ST	15,000	14,171	16.4	0	0 ^G	0

SUMMARY OF GOVERNMENT INVENTORIES, GOALS,
EXCESSES AND BALANCE OF DISPOSAL AUTHORIZATIONS (Continued)

Basic Stockpile Materials
March 31, 1977

(Market Value - Millions of Dollars)

Commodity	Unit	Goal ¹	Total Inventory ²	Market Value ³	Excess ⁴	Deficit	Balance of Disposal Authorization
53. Mercury	FL	54,004	200,058	\$ 35.6	146,054	0	0
54. Mica, Muscovite Block, Stained and Better	LB	6,188,000	6,188,000	27.8	0	0	0
55. Mica, Muscovite Film, First and Second Qualities	LB	90,000	1,294,462	15.5	1,204,462	0	26,633
56. Mica, Muscovite Splittings	LB	12,631,000	22,328,433	26.6	9,697,433	0	3,268,558
57. Mica, Phlogopite Block	LB	206,064	130,745	0.2	0	75,319	0
58. Mica, Phlogopite Splittings	LB	932,000	2,994,675	3.6	2,062,675	0	2,044,675
59. Molybdenum Disulphide	LB Mo	0	0	0	0	0	0
60. Molybdenum, Ferro	LB Mo	0	0	0	0	0	0
61. Nickel	ST Ni+Co	204,335	0	0	0	204,335	0
62. Opium, Gum	LB	0	30,205	6.8	0 ^{II}	0	0
63. Opium, Salt	LB	75,000	39,508	21.4	0	5,287 ^H	0
64. Platinum Group Metals, Iridium	TrOz	97,761	17,001	5.2	0	80,760	0
65. Platinum Group Metals, Palladium	TrOz	2,450,000	1,254,993	72.2	0	1,195,007	0
66. Platinum Group Metals, Platinum	TrOz	1,314,000	452,642	75.6	0	861,358	0
67. Pyrethrum	LB	377,851	0	0	0	377,851	0
68. Quartz Crystals	LB	0	2,642,077	7.5	2,642,077	0	2,322,077
69. Quinidine	AvOz	6,841,000	1,800,356	12.3	0	5,040,644	0
70. Quinine	AvOz	3,045,000	3,246,166	15.3	201,166	0	0
71. Rubber	LT	513,134	120,786	113.0	0	392,348	0
72. Rutile	SDT	173,928	39,186	11.8	0	134,742	0
73. Sapphire and Ruby	KT	0	16,305,502	0.2	16,305,502	0	0
74. Silica	LB	8,529,000	0	0	0	8,529,000	0
75. Silicon Carbide, Crude	ST	306,628	102,177	29.1	0	204,451	0
76. Silver (Fine)	TrOz	0	139,500,000	691.9	139,500,000	0	0
77. Talc, Siccite Block and Lump	ST	104	1,118	0.4	1,014	0	918
78. Tantalum Carbide Powder	LB Ta	889,000	28,688	0.8	0	860,312	0
79. Tantalum Metal	LB Ta	1,650,000	201,133	9.1	0	1,448,867	0
80. Tantalum Minerals	LB Ta	5,452,000	2,551,915	40.7	0	2,900,085	0

**SUMMARY OF GOVERNMENT INVENTORIES, GOALS,
EXCESSES AND BALANCE OF DISPOSAL AUTHORIZATIONS (Continued)**

**Basic Stockpile Materials
March 31, 1977**

(Market Value - Millions of Dollars)

Commodity	Unit	Goal ¹	Total Inventory ²	Market Value ³	Excess ⁴	Deficit	Balance of Disposal Authorization
81. Thorium Nitrate	LB	1,800,000	7,256,896	\$ 9.1	5,456,896	0	5,456,896
82. Tin	LT	3,499	202,842	2253.7	170,343	0	2,216
83. Titanium Sponge	ST	131,503	32,331	162.8	0	99,172	0
84. Tungsten Carbide Powder	LB W	12,845,000	2,037,833	30.2	0	0 ¹	0
85. Tungsten, Ferro	LB W	17,769,000	2,025,491	23.8	0	0 ¹	0
86. Tungsten, Metal Powder	LB W	3,290,000	1,765,491	22.9	0	0 ¹	0
87. Tungsten Ores and Concentrates	LB W	8,823,000	105,601,107	1110.9	64,829,210 ¹	0	64,665,511
88. Vanadium, Ferro	ST V	10,095	0	0	0	10,095	0
89. Vanadium Pentoxide	ST V	2,576	539	5.3	0	2,037	0
90. Vegetable Tannin Extract, Chestnut	LT	6,942	21,152	11.4	14,210	0	11,652
91. Vegetable Tannin Extract, Quebracho	LT	37,998	162,147	84.4	124,149	0	111,547
92. Vegetable Tannin Extract, Wattle	LT	20,208	17,225	8.8	0	2,983	0
93. Zinc	ST	1,313,000	373,048	276.1	0	939,952	0

FOOTNOTES

¹ Stockpile goals established as of October 1, 1976. In some cases, where the stockpile grade material on hand was insufficient to meet goals, nonstockpile grade material has been temporarily applied. Future analysis may result in changes to material selections.

² Total inventory consists of stockpile and nonstockpile grades and reflects uncommitted balance.

³ Market values are computed from prices at which similar materials are being traded; or, in the absence of current trading, at an estimate of the price which would prevail in commercial markets. Market values are unadjusted for normal premiums and discounts relating to contained qualities or for inherent materials-handling allowances. *The market values do not necessarily reflect the amount that would be realized at time of sale.*

⁴ Includes materials for which Congressional disposal legislation was pending.

⁵ Balance available due to rotation in order to prevent deterioration.

Offsets

All conversion and processing loss factors, where applicable, have been taken from the Office of Emergency Planning Strategic and Critical Materials Reference Data Booklet, dated November 1, 1966.

A 8,335,881 LDT of surplus bauxite, metal grade, Jamaica type, were used to offset 3,748,562 ST of alumina shortfall. 5,299,596 LDT of surplus bauxite, metal grade, Surinam type, were used to offset an additional 2,761,620 ST of alumina shortfall. 1,683 ST of surplus aluminum metal were used to offset another 3,248 ST of alumina shortfall.

B 24,095 ST of surplus aluminum oxide, fused, crude, were used to offset a 24,095 ST shortfall in aluminum oxide, abrasive grain, on a 1/1 basis.

C 13,319 ST of surplus beryl ore (11% BeO) were used to offset 100% of the 9,323 ST shortfall of the beryllium copper master alloy. An additional 4,667 ST of surplus beryl ore were used to offset 117 ST of the beryllium metal shortfall.

D 166,694 ST of surplus chromium, ferro, high carbon, were used to offset 416,735 SDT of the chromite, metallurgical grade ore, shortfall. Also, 70,753 ST of surplus chromium, ferro, low carbon, were used to offset an additional 176,883 SDT shortfall of the chromite, metallurgical grade ore.

E 21,372 LB of surplus columbium carbide powder were used to offset 25,144 LB of columbium concentrates shortfall. 44,851 LB of surplus columbium, metal, were used to offset 52,766 LB of columbium concentrates shortfall. 930,911 LB of surplus columbium, ferro, were used to offset 1,095,189 LB of columbium concentrates shortfall.

F 16,098 SDT of surplus manganese, battery grade, natural ore were used to offset 16,098 SDT of manganese, battery grade, synthetic dioxide, shortfall on a 1/1 basis.

G 140,160 SDT of surplus manganese ore, metallurgical grade, were used to offset a shortfall of 70,080 ST of manganese, ferro, medium carbon. 103,367 SDT of surplus manganese ore, metallurgical grade, were used to offset a shortfall of 57,426 ST of manganese, ferro, silicon. 2,073 SDT of surplus manganese ore, metallurgical grade, were used to offset a shortfall of 829 ST of manganese metal, electrolytic.

H 30,205 AMA LB of surplus opium gum were used to offset 30,205 AMA LB of opium salts shortfall on a 1/1 basis.

I 3,028,661 LB of surplus tungsten ores and concentrates were used to offset a shortfall of 10,812,167 LB of tungsten carbide powder. 17,128,938 LB of surplus tungsten ores and concentrates were used to offset a shortfall of 15,743,509 LB of tungsten, ferro. 1,791,298 LB of surplus tungsten ores and concentrates were used to offset a shortfall of 1,524,509 LB of tungsten, metal powder.

Abbreviations

AvOz	- Avoirdupois Ounce	LCT	- Long Calcined Ton
FL	- Flask (76-Pound)	LDT	- Long Dry Ton
KT	- Karat	LT	- Long Ton
LB	- Pound	PC	- Piece
LB Cb	- Pounds of Contained Columbium	SDT	- Short Dry Ton
LB Co	- Pounds of Contained Cobalt	ST	- Short Ton
LB Mo	- Pounds of Contained Molybdenum	ST NiCo	- Short Tons of Contained Nickel plus Cobalt
LB Ta	- Pounds of Contained Tantalum	ST V	- Short Tons of Contained Vanadium
LB W	- Pounds of Contained Tungsten	TrOz	- Troy Ounces

Source: General Services Administration Stockpile Report to the Congress
October 1976 - March 1977, dated October 1977.



General
Services
Administration Washington, DC 20405

MAY 18 1978

Honorable Elmer B. Staats
Comptroller General of the United States
General Accounting Office
Washington, DC 20548

Dear Mr. Staats:

Enclosed are our comments on the draft GAO study entitled, "The Strategic and Critical Materials Stockpile Will Be Deficient for Many Years."

In general, the report contains many useful comments and suggestions for improving the management of the stockpile. We had begun action on some of the suggested improvements even before the draft report was received. For example, we have established a GSA Storage Site Selection Criteria Committee, with membership from the Federal Preparedness Agency, the Federal Supply Service and the Public Buildings Service. This Committee will investigate the factors noted in several sections of the draft study.

There are, however, some sections of the draft report which we believe should be modified or eliminated:

1. We recognize that there is always room for improvement in management, but it appears we are being evaluated on partially invalid criteria:

- GSA does not set its own budget level;
- GSA carries out the intent of the Congress regarding the avoidance of market disruption in commodities markets.

GSA's stockpile management effectiveness, therefore, should be evaluated in the light of those constraints.

2. Statements which imply that the value of the shortfall in certain stockpile goals is a measure of the seriousness of the shortfall.

- The President has determined the most crucial readiness priorities for the stockpile; most of these should be filled by FY 1981;
- A major policy review should take place in about two years at which time the goals may be changed in either direction (or not at all).

3. Unrealistic statements, such as those indicating it would take 70 years to fulfill the jewel bearings goal:

- Our comments point out that the jewel bearings goal will decline markedly in the next few years because of decreased watch bearing requirements;
- The main purpose of the jewel bearings plant is to provide a domestic production source during an emergency.

4. Overstatement of the quality deficiencies of some stockpile materials with respect to their purchase specifications:

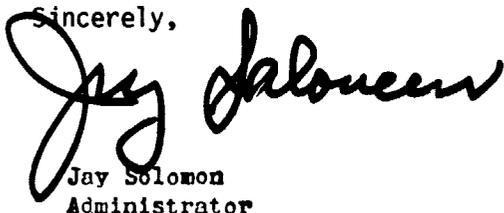
- Capacitor grade tantalum metal powder, though unsuited for direct application to high performance electronics, is in fact in good condition to be used for other electrical and non-electrical applications in an emergency. The swift rate of technological change in the electronics industry makes it imprudent at present to upgrade to industry specifications;
- The platinum group metals inventories are suitable for war-time applications in all but a very limited percentage of potential applications.

5. Criticisms of former management practices that were objectionable to GAO but have been or are being remedied:

- Long term contracts will not be entered into except under unusual conditions;
- Custodial transfers of materials have been severely restricted and the policy is in the public domain;
- A GSA committee is in operation to analyze the best storage sites for stockpile materials.

We will be happy to meet with your representatives to discuss our comments in more detail.

Sincerely,



Jay Solomon
Administrator

Enclosure

GAO note: Page references in this appendix refer to the draft report.

GSA COMMENTS ON DRAFT OF A PROPOSED REPORT:
THE STRATEGIC AND CRITICAL MATERIALS STOCKPILE
WILL BE DEFICIENT FOR MANY YEARS

Digest, page ii: Suggest changing title above the second paragraph to: "Management of the Existing Stockpile Program Can Be Improved."

Comment: The first sentence in support of the heading in the draft report is not wholly accurate. Congress has not specified any particular point in time at which they want the stockpile 100 percent ready. The appropriate Congressional Committees have been briefed on the procurement lead times involved which are caused by market constraints. To date, the committees have expressed interest in procuring up to market constraints but not beyond. We interpret this as the intent of Congress and we attempt to carry it out.

Since the stockpile is but one of several aspects of the U.S.' overall readiness posture, requested funds for procurement may need to be reduced to satisfy higher-priority defense programs. Such actions have been made by the President in the recent past. We do not view this as ineffective stockpile management.

We do recognize that there are aspects of the management of the stockpile program that can be improved. We are taking positive steps, where appropriate, to improve the management of the stockpile program.

Digest, page ii: Suggest changing the title to: "Stockpile Goals Will Not Be Met For Several Years Under Current Policy Planning."

Comment: The stockpile is based on a 9-sector wartime economy (3 economic sectors and 3 war years). The President's immediate readiness concern as announced by the Administrator of General Services in a press release of October 7, 1977, is to be prepared for the first year of a war and to assure that backup for the defense sector will be attained as quickly as possible. These requirements will be mainly satisfied within the next three years if the

appropriations requested for fiscal years 1978 and 1979 and those being planned for fiscal year 1980 are granted. Thus, the Administration is moving quickly to avoid possibilities of immediate peril to the national defense.

In keeping with the approved stockpile planning process, another policy review will be made in about 2 years. At that time, the President's options will be: (a) to proceed as per the present planning; (b) to restrict the components of the wartime economy to less than 9 sectors; (c) to expand the components of the wartime economy to more than 9 sectors; or (d) to restudy and modify the entire system.

If the President were to select either options (b) or (d), stockpile goals could drop markedly. If option (a) were selected, then the statement in the draft report is correct in part: the long acquisition lead times referred to in the draft study are required in large part because some of the needed materials are agricultural commodities whose crop-cycles are relatively fixed in terms of quantity and timing.

It should be noted that 42 materials have goals entirely filled. Another 10 materials' goals can be filled through upgrading of existing inventories when that phase of the stockpile program is entered.

Digest, page iii, paragraph 2: "FPA intentionally restricts the rate of acquisition. Its caution in acquiring materials stems from budget constraints, concern with international political effects of stockpile transactions and possible market disruptions."

Comment: The Strategic and Critical Materials Stock Piling Act (Sec. 3a) states that "...purchases shall be made, so far as is practicable, from supplies of materials in excess of the current industrial demand." GSA has interpreted this as avoiding the undue disruption of the markets of producers, processors and consumers as is required in the case of disposals. Thus, GSA believes it is carrying out the intent of Congress by proceeding in this manner. In addition, the relevant Congressional committees have been briefed on

these policies. While true that budgetary considerations may constrain the acquisition plan, this is a matter over which GSA has no control.

Digest, page iii, paragraph 2: "...current policies spread the acquisition over a period of 15 to 70 years."

Comment: The statement is incorrect in part. As mentioned earlier, the longer lead times, associated mainly with agricultural products, will extend to 15 years or more if the current stockpile policy is maintained indefinitely. It should be emphasized that it is not GSA policy to spread the acquisitions over 15 or more years--those periods are determined by the interaction between the characteristics of materials and the market disruption constraints.

The 70 year figure is inaccurate: it applies to jewel bearings and was derived by comparing present procurement rates to the existing jewel bearing goals. The jewel bearing goal can be expected to drop dramatically over the next 5 years, and the attendant acquisition lead time will drop with it. GSA has scheduled only 1 million jewel bearings a year for procurement because that amount represents a balance between (a) the anticipated goal reductions and (b) the need to maintain a domestic source of jewel bearing production for periods of emergency.

Digest, page iii, paragraph 3, bullet number 1: "There is no formal policy or practice for comparing industrial requirements with existing stockpile inventories."

Comment: A formal policy has been established, and we are in the process of putting it into practice. More detail is provided in the comments on page 3.6.

page 1.5, line 6: Add Treasury after Defense.

page 2.1, paragraph 1: "...we believe they (stockpile goals) will not be attained within a reasonable period of time to meet stated readiness needs."

Comment: The term "reasonable period of time" is not defined. The highest priority needs should be satisfied for most materials by FY 1981 if existing and planned funding requests are approved by the Congress.

page 2.1, paragraph 2: "Attainment of stockpile goals is hampered by FPA's caution..."

Comment: As described in the comments in the Digest of the draft report, GSA's policy with respect to the nondisruption of domestic and international markets originates in the Strategic and Critical Materials Stock Piling Act. GSA is thus carrying out the intent of Congress. Matters of budget constraints are not within the purview of GSA. It should be noted, however, that both Congressional subcommittees having jurisdiction over stockpile sales have clearly expressed their desires to have annual requests for appropriations and sales balanced according to either net receipts or the costs and sales in the initial stages of stockpile restructuring.

page 2.1, paragraph 3: "Planned acquisitions and disposals of stockpile materials are presented to Congress each year in the Annual Materials Plan."

Comment: The Annual Materials Plan is a document submitted to the National Security Council each year for consideration in establishing the President's budget, not to the Congress. Copies may be made available to the chairmen of the Congressional subcommittees if requested and if approved by the National Security Council.

page 2.2, paragraph 2: "...FPA is not likely to reach its stated goal for jewel bearings for over 70 years..."

Comment: The planned procurement of jewel bearings has been limited intentionally to one million bearings per year until a more definitive assessment can be made of existing technological trends. Changes in technology have resulted in a decline of jewel bearing consumption in the United States. Light-emitting diodes, liquid

crystal displays, and oscillating quartz components have eliminated mechanical motion in many measuring and timing devices. Without mechanical motion, the need for jewel bearings is eliminated. On the basis of preliminary supply-requirement data, we anticipate that the next stockpile goal will be about 10 percent lower than the current goal. An examination of the feasible rates of substitution for jewel bearings under emergency conditions could further reduce the goal.

Annual procurement at this level will keep the domestic Government-owned plant viable to supply the U.S. in time of emergency, which is the main point of having the plant. This rate also will lessen the likelihood of adding to the government's inventories materials that may be technologically obsolete in the near future.

page 2.5, paragraph 2: "FPA has published no specific policy guidelines on loaning of stockpile materials."

Comment: While it is true that GSA/FPA has not published these guidelines as an official document, they were published in the report of hearings before the Senate Armed Services Committee of September 9, 1977. A copy of the statement is provided as Attachment 1. The policies surrounding the grant of custodial transfers has been tightened considerably in the past 3 years. There is no need to publish the policy because only a few Federal agencies make such requests and these can be handled in routine correspondence.

page 3.2. line 2: "Additionally, there are many materials in the stockpile which met Government specifications when purchased 20 years ago, but do not meet current industrial standards."

Comment: We suspect that there are some materials that fall into this category. To properly evaluate the problem requires two steps: (1) a review of purchase specifications and (2) an analysis of the state of the inventory in the light of the reviewed specifications. An Interagency Purchase Specifications and Special Instructions Committee was formed in December, 1976 to carry out the required

reviews. Although given a broad mandate for review, the Committee has accorded priority to the review of the 43 materials appearing in the FY 1978-1979 Annual Materials Plan. We will recommend that they review all stockpile materials at least once every 5 years.

Although some materials may be below specification grades, the deviations may be slight. To the extent that this is true, the national security will not be jeopardized to any great extent. For example, recently reviewed specifications call for platinum of 99.95 percent purity, the same as in 1968, but to be held as sponge. Most of our platinum now is in bar, plate or sheet form. While some limited uses of platinum would require at least the 99.95 percent purity sponge, the existing stock could be used widely in a national emergency in other applications. Thus, GSA believes it would be more cost-effective to purchase the platinum needed for the rigid specifications than to upgrade the entire inventory which presently can be used by most of the industry. (Also, see below comments on page 3.7-3.8).

page 3.3, paragraph 2: "Obviously, refining or other processing capacity would be needed to upgrade the excess lower form materials. However, the needed capacity would not be available during wartime since the goal setting process assumes full use of all such domestic smelting and refining capacity."

Comment: The device of "offsetting" is conditioned on two factors: (a) existing law and (b) acquisition priorities. Section 3(e) of the Strategic and Critical Materials Stock Piling Act requires that we attempt to dispose of materials excess to national security requirements. Thus, if we did not set aside some of the excesses in selected forms, OMB could request us to sell them. By holding one or more forms against the goal we avoid having to dispose of excess materials that can be retained for cost-effective upgrading programs. For example, the offsetting technique utilizes Jamaican bauxite to hold against the alumina goal. If the bauxite were shown as excess, it would have to be put up as a candidate for disposal legislation. At some point in the future, however, the bauxite can be upgraded to alumina.

In the meanwhile, scarce dollars can be applied to acquisition of materials having higher priorities, which is the second factor for consideration. The President has determined priorities for the 9-sector "stockpiling economy," and acquisition of the materials in those priorities must be given preference with funds received from Congress. After these priorities are satisfied, we intend to request funds for upgrading and also to use excess materials authorized for disposal as payment for upgrading.

We agree that capacity to upgrade in wartime will be greatly restricted. The intention is to complete the upgrading program before the outbreak of a war.

page 3.4, paragraph 1: "Feathers and down have been sold under the rotation provision of the Act, but they have not been repurchased".

Comment: Feathers and down have not been purchased in the recent past pending a finding of (a) obsolescence or (b) a drastic reduction in requirements, and hence the goal. A Department of Defense position is being formulated, and the need for this material should be clarified in the near future.

page 3.4, paragraph 2: "Upgrading stockpiled materials will cost the government hundreds of millions of dollars."

Comment: This is correct. However, when buying virgin material proves more costly than upgrading, upgrading is justified.

page 3.6, paragraph 1: "GSA has no formal policy or practice for comparing current industrial requirements with existing stockpile inventory to identify limitations in materials uses."

Comment: The statement is partially correct. GSA does have a formal policy for tracking changes in materials requirements—beginning with the establishment of Industry Advisory Committees (IAC). GSA's Office of Stockpile Disposal is culling its mailing lists to identify candidates for these Committees. The statement is correct in the sense that this policy has not yet been implemented. The relevant Committees will be established prior to

the setting of new stockpile goals later in FY 1978. The Interagency Committee on Purchase Specifications and Special Instructions (ICPSSI) will receive pertinent information from the IAC's. In the cases where the ICPSSI issues revised specifications or instructions, it will be the responsibility of FSS to locate and report any materials not in compliance. Since this new system has not had opportunity to function, we suggest that judgment be withheld until we have had an opportunity to observe and modify it.

For the 43 materials in the Annual Materials Plan for FY 1978-79, the ICPSSI had to assume the major burden of identifying new specifications for materials. The members of this Committee, it should be noted, are predominantly commodity and industry specialists, who in addition to their own expertise, maintain constant liaison with the materials industries involved.

page 3.7, paragraph 1: "In general, materials meeting the original purchase specifications are shown as specification grade material in GSA inventory records regardless of subsequent changes....1.7 million pounds of this material is classified as specification grade quality and is applied to the cobalt goal."

Comment: The purchase specifications for cobalt are stringently written to safeguard its useability in defense applications. About 96 percent of the cobalt in inventory applied to the goal can be used for any applications, defense or general industrial. The remaining 4 percent would not meet defense needs. However, even the material not meeting specifications for defense applications is still useable for essential or general civilian needs.

For example, cobalt is alloyed with the iron and carbon for use in high temperature alloys, magnets and tool steels. Thus, the presence of small added amounts of these two elements, while not up to stockpile specifications, does not render the material obsolete or unuseable for these applications.

page 3.7, - 3.8, beginning paragraph 2: "Comparison of existing stockpile inventory quality with current industrial requirements demonstrates instances where stockpile materials are not ready for immediate use in a national emergency. Stockpile inventories of tantalum metal powder and the platinum group metals are illustrative of this situation."

Comment: The discussion in the draft report creates an impression of more seriousness than actually exists with respect to these two classes of materials:

I. Tantalum Metal Powder:

GSA has examined the conditions surrounding the 165,000 pounds of capacitor grade tantalum metal powder currently classified obsolete for high performance electrical capacitor applications. Although this material represents 82 percent of the current stockpile inventory, it represents only 10 percent of the goal. Approximately 30 percent of the consumption of tantalum metal is for non-electrical applications. A similar proportion of the goal material is held for non-electrical applications.

This material is considered obsolete in high performance electrical applications because of the size or fineness of the powder granules. It still can be used in a wide range of other capacitors. In addition, in its present form as a fine powder, rather than ultra-fine, the powder can be considered as an intermediate or semi-finished product. All future processing to ingot, slab, wire or ultra-fine powder begins with powder. The powder is prepared for processing and then remelted or forged before reaching final form. Holding the material as powder for non-electrical applications thus saves energy, eliminates a number of manufacturing steps and relieves any potential pressure on the capacities of the earlier processing stages. In addition, the powder form also retains the flexibility for conversion, by way of different processing streams, to tantalum carbide or tantalum bearing alloys.

GSA has considered the upgrading of this material but until the rate of technological change in the capacitor industry stabilizes, the same risk of obsolescence would be present with the upgraded material. Accordingly, upgrading must be approached with caution.

2. Platinum:

The draft report states that none of the stockpile inventories of platinum group metals meet both the current chemical requirements for purity and physical requirements for sponge form. This is a technically true statement, since the entire 20 year old platinum metal inventory is in bar, plate or sheet form in contrast to new 1976 purchase specifications which changed the form to metallic sponge. Several features in the GAO analysis should be noted to avoid misleading the reader of the final report.

First, as the draft report acknowledges, stockpile material met existing purchase specifications upon delivery in the 1950's. Also, GSA is aware of this recently-changed situation and is in the process of evaluating upgrading projects to remedy it. Second, there exists no significant commercial purity shortfall below specification for the current platinum group stockpile. More than 292,000 ounces (65 percent of the platinum stockpile) exceeds 99.95 percent purity (the current specification). In 1969, the domestic industry's major producer upgraded 200,000 ounces of stockpile platinum to 99.5 percent purity. Less than 1 percent of the platinum stockpile falls below 99.5 percent purity. The remaining material cannot be used for above-highest-purity Defense applications, but our industry surveys concluded many existing essential civilian industrial applications can use stockpile material in bar, sheet or plate form between 99.5 percent and 99.95 percent purity. Such applications include dental and medical uses, research catalysts, wire resistance contacts, air purification catalysts, magnets, electron tube components, electric blasting caps, dyes, hydrogen peroxide, nylon intermediates, sulfur dioxide oxidation and perchlorates research uses. Similar comments apply to palladium and iridium. The latter was also upgraded in 1969.

The draft report refers to a major platinum group producer as advocating the need to upgrade and refine GSA's inventory further to reflect more sophisticated platinum metal Defense requirements such as catalysts for nitric acid in the production of ammunition and refined aviation and rocket fuel. In the last year, this producer has proposed on several occasions that GSA grant the industry an upgrading contract for this purpose. The producer thus is not an unbiased source of information.

GSA platinum metal stocks are in fact ready for immediate national use in an emergency now in a wide spectrum of defense and essential civilian uses. Although purity levels would not permit exclusive use of the entire stockpile in the highest purity defense applications, the major platinum metal stockpile requirements reside in the essential civilian wartime sector. Here stockpile platinum metals, in their given form and purity, are well suited for applications with varying industrial material specifications.

page 3.9, paragraph 2: "GSA policy requires that materials acquired for the stockpile be sampled, analyzed, tested and physically evaluated prior to acceptance to ensure that they conform to all specifications and contract requirements."

Comment: Stockpile materials are sampled and analyzed when it is required for sale, relocation, repackaging or other similar reasons. However, to routinely sample and analyze materials in storage for inventory or quality verification would not only be extremely costly, but of questionable accuracy, particularly for ores and partially processed raw materials. Significant increases in budget and staffing would be required for such evaluations. It is assumed, in the absence of physically obvious signs of change, that stored materials are of the same quality as originally accepted. The FSS qualitative inspection program identifies suspect materials and leads to testing and reporting changes.

page 3.10, paragraphs 1 and 3: Referring to quinidine and quinidine sulfates, where 10 lots of drugs were not destroyed as recommended.

Comment: Much of the material cited may have a potential to be upgraded, as the 426,600 ounces of quinine sulfate was deemed subspecification merely on the basis of an optical test, not a chemical analysis. Of the remainder, 3,409 ounces of quinidine sulfate is off color but may be usable and 50,000 ounces is below chemical requirements. Information available to GAO indicates that destruction of the material as suggested by FDA is not in order at this time.

page 3.10, paragraph 4: "Rubber"

Comment: When GSA first stockpiled natural rubber, there was little, if any, knowledge of its long term storage characteristics. A rotational period of 5 years was specified. Materials need not be rotated, however, if they haven't deteriorated. Natural rubber changes into a crystalline structure and becomes hard at 34°F. This "freezing" process which has taken place over several years allows natural rubber to be stored for indefinitely long periods. Without freezing there would be a very costly rotation program with stockpiled rubber.

When thawed, stockpiled natural rubber has virtually the same characteristics as newly produced rubber. In the past millions of pounds of excess rubber, were sold, and few complaints have been voiced by industry. Allowances have been granted to buyers for thawing to bring the rubber to the original condition. Thus, the buyers' total processing costs were not increased by any great amount.

Natural rubber is visually inspected, a process agreed to by the Rubber Trade Association. New special instructions are being prepared for the purchase of small quantities of technically specified rubber (TSR). The storage characteristics of TSR will be tested at various storage sites. Unlike the presently stockpiled ribbed smoked sheets, which are subjected to visual inspection, TSR is processed and packed with guaranteed quality.

Regarding comments from the National Bureau of Standards on visual

inspection, it should be noted that such inspections have been considered meaningful during disposals when Government personnel and potential buyers visually inspect lots offered for sale.

page 3.11, paragraph 2: "We identified several materials where buyers found the quality significantly less than GSA's analysis of record."

Comment: GSA recognizes the type of problem cited by GAO in its sales of excess material to industry and normally offers items on an "as-is, where-is" basis according to the best information available. In some instances, where significant differences in quality have occurred, appropriate adjustments have been made. In view of the \$7.2 billion in sales made during the disposal program, the quality problems and related complaints from buyers such as those cited by GAO have been minimal.

page 3.11, paragraph 2, bullet no. 1: "lower morphine content than GSA's analysis of record"

Comment: The 500,000 pounds of stockpiled gum opium was composed primarily of Turkish opium. It had been stockpiled for 20 years and had deteriorated severely before the sale, which contributed to the lower morphine content. Between the time of the original purchase and the sale, different methods were used to measure the anhydrous morphine content of the Turkish opium. The analytical methodology has changed over the years, but there is still frequent disagreement among reputable laboratories. In the future, we expect to have analyses conducted in accordance with guidelines issued by the Drug Enforcement Agency.

page 4.1, paragraph 2: (Referring to past and present storage policies) "Obviously, this policy does not fully consider other factors which could affect the prompt availability of material during a national emergency."

Comment: This is a good point and GSA is taking action to review the policy. GSA has established a Storage Site Selection Criteria

Committee, chaired by FPA, with additional members drawn from FSS and PBS. As of this writing the Committee has met twice and has outlined a study plan. The study will include analyses of wartime materials imbalances by region; the means to satisfy those imbalances through enhanced use of existing facilities or constructing new facilities; vulnerability to sabotage or other disaster; adequacy of transportation; environmental consequences; and the costs associated with attendant alternatives.

page 5.1, paragraph 1: "...proper management of the stockpile should entail the acquisition of needed materials within a reasonable period of time."

Comment: The evaluation of the management of the stockpile, we believe, should be related to how well the managers are proceeding within the constraints levied on them by the law and by the Administration. For example, if Congress wants GSA to accelerate its acquisitions program, GSA must first be relieved of the legal and binding market constraint/industrial demand clauses of the Strategic and Critical Materials Stock Piling Act. If that occurs, then GSA managers still will need increased budget allocations from the President to step up the pace of the program. We recognize that there is always room for improvement in management, but it appears we are being evaluated on partially invalid criteria.

page 5.1, bullet number 5: "--custodial loans of material which reduce the available inventory to satisfy stockpile goals..."

Comment: The attainment of stockpile goal is not hampered by custodial transfers. The materials are classified as being in inventory and thus chargeable to the goal. There is a risk that the material may be unavailable in an emergency, but this risk has been reduced to nearly zero in the past 3 years. A custodial transfer of iridium, made in the early 1970's will be replaced relatively slowly. Beyond this one material, however, GSA believes it can adequately recover any other outstanding materials well within the limits of the planned emergency.

page 5.2, paragraph 1. "The practice of reporting goals as being satisfied by inventory which does not meet stockpile specifications or is not in the desired form tends to significantly overstate stockpile readiness."

Comment: There is no intent to overstate stockpile readiness through the use of offsets in stockpile data. As mentioned in a prior comment, earmarking excess materials for goals in other materials prevents them from having to be sold. The Semi-Annual Stockpile Reports to the Congress and other statistical sources themselves contain elaborate footnotes explaining in detail how the offsets are applied and serve the express purpose of indicating the readiness state of the stockpile. The alternative is to not show the offsets, which we believe would significantly understate the readiness of the stockpile.

page 5.3, bullet number 1: "...formulate shorter schedules for meeting stockpile acquisition goals and provide the Congress with estimates of the long range outlook for fulfilling stockpile goals in the Annual Materials Plan."

Comment: As part of its FY 1980 ZBB high-level submission, GSA will submit a schedule of acquisitions that fits the President's priorities up to market constraints. For reasons already discussed, we cannot go beyond those limits.

page 5.4, bullet number 1: "assure that stockpile materials are loaned to Government agencies and contractors only when they are surplus to goals, or with absolute assurance that they will be returned in time to avoid unanticipated stockpile shortages that would be contrary to the objectives of the Stock Piling Act."

Comment: GSA agrees. This is wholly acceptable and in keeping with present practices.

page 5.4, bullet number 2, item (1). (Identify)"...those materials which do not meet individual requirements or are not in the desired form."

Comment: Materials not in the desired form already are reported in the Semi-Annual Stockpile Report to the Congress and in its Statistical Supplement. Materials not meeting specifications will be reported as they become known.

page 5.4. bullet number 2, item (2): (Identify)"...the cost and time needed to convert these materials"

Comment: GSA is willing to provide these estimates under the assumption that users of such data will understand the limitations of the data. The estimates will change, for example, with variations in the business cycle and other price influencing mechanisms.

page 5.4, bullet number 3: "establish a formal procedure for the systematic and periodic review of specifications for stockpile materials."

Comment: We agree that this procedure can become more systematized, and we will cooperate with the Interagency Committee on Purchase Specifications and Special Instructions to carry out this recommendation.

page 5.4, bullet number 4: "...determine all instances where stockpile materials has deteriorated below acceptable standards, and include such information in its report to the Congress."

Comment: We agree that this will be useful information and will provide it when it becomes available.

GENERAL STOCKPILE POLICY

HEARING
BEFORE THE
SUBCOMMITTEE ON
MILITARY CONSTRUCTION AND STOCKPILES
OF THE
COMMITTEE ON ARMED SERVICES
UNITED STATES SENATE
NINETY-FIFTH CONGRESS

FIRST SESSION
ON

UNCLASSIFIED

S. 1198

A BILL TO AMEND THE STRATEGIC AND CRITICAL MATERIALS STOCK PILING ACT, AND FOR OTHER PURPOSES

S. 1810

A BILL TO AMEND THE STRATEGIC AND CRITICAL MATERIALS STOCK PILING ACT IN ORDER TO PRESCRIBE THE METHOD FOR DETERMINING THE QUANTITY OF ANY MATERIAL TO BE STOCKPILED UNDER SUCH ACT, AND FOR OTHER PURPOSES

SEPTEMBER 9, 1977

Printed for the use of the Committee on Armed Services

UNCLASSIFIED



The practice of custodial transfers was developed because it was expected to result in positive benefits to the Nation with no or very little risk to national security. In general, we believe the objectives of the program have been met satisfactorily. In recent years there has been considerable tightening of the policies that determine whether a request for a transfer will be granted. Specifically, when the materials are clearly obsolete for national defense purpose or excess to the goals of the stockpile program, transfers may be made directly to other government agencies pending sale of the materials. Transfers are made indirectly to agencies' contractors only if the agency agrees to assume full and complete liability for the material and also agrees to other terms of the transfer. It is our general policy to make custodial transfers only when the material is in excess of the stockpile goals and to require prompt return of materials at the end of the transfer period, or on demand by FTA.

Exceptions to this policy are possible if there is an urgent need, if the material is readily recallable, and if the amounts involved are relatively small. This was the case, for example, with the transfer of 110 short tons of lead to the U.S. Geological Survey (see attached table): U.S. Geological Survey wanted the lead to avoid overencumbering a limited research budget, indicated that the ship using it would remain close to shore, and that the material could be recalled if needed for an emergency. In view of these facts, and also because our lead goal is entirely for the general civilian sector of the economy, the Director of the Federal Preparedness Agency granted an exception to policy and authorized the transfer.

In addition to the criteria just mentioned, other criteria are applied for materials whose inventory levels are at or near their respective goal levels:

Is the material returnable within the time frame necessary to meet a national defense emergency?

Would the transfer disperse our stockpile to such an extent that it would adversely affect the use of the materials during a national emergency?

Is the request a request of "convenience" or can the demand be readily met in the current market place at a reasonable price and with reasonable efficiency?

Is the material requested currently available for disposal from the stockpile? (If so, the requesting agency first would be required to purchase the excess).

Will savings to the taxpayer likely result from the transfer?

The material ordinarily must meet the grade set forth in the National Stockpile Purchase Specification at the time of the return.

Is there an indirect contribution to the energy supply problem at no cost to the Government?

When a goal is changed for a material which was previously transferred under the "custodial transfer" program, a deficit in the stockpiled amount could conceivably occur. For this reason, custodial transfers are now only made for relatively short periods and with the additional requirement that the material remain readily available for return upon demand (as was the case for the lead transfer to U.S. Geological Survey). Thus, very little risk to the national security is incurred with the current policies used for custodial transfers. As shown in the attached table only relatively small amounts will be out on transfer after 1978.

PRINCIPAL OFFICIALS RESPONSIBLE FOR
ACTIVITIES DISCUSSED IN THIS REPORT

Tenure of office
From To

FEDERAL PREPAREDNESS AGENCY

DIRECTOR:

Joseph A. Mitchell	Nov. 1977	Present
Leslie W. Bray	Oct. 1973	Nov. 1977

GENERAL SERVICES ADMINISTRATION

ADMINISTRATOR OF GENERAL SERVICES:

Joel W. Solomon	May 1977	Present
Robert T. Griffin (acting)	Feb. 1977	Apr. 1977
Jack Ecker	Nov. 1975	Feb. 1977